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Optionally controller (206) configures fuel cell module (200) to generate 42-volt, 14-volt, or other voltage electrical power, as may be used by one or more telematic appliance (103).

Optionally controller (206) couples to fuel cell module (200) or telematic appliance (103) through shared connection or other electrical interconnect, wire, bus or channel, through which synchronous or asynchronous control signal and/or power signals are provided or transmitted simultaneously or at separate times.

Optionally controller (206) couples electrical power from a generator, solar cell, or other electrical power generation source as backup auxiliary to one or more telematic appliance (103).

Optionally controller (206) controls electrical power in response to a sensor signal provided by telematic appliance (103). Sensor signal may represent fault or error condition, media format or load, or location or jurisdiction of telematic appliance (103).

Optionally controller (206) adaptively controls electrical power reactively in response to measured quality of electrical power signal, proactively according to predicted function or scheduled service in telematic appliance (103).

Foregoing descriptions of specific embodiments of the invention have been presented for purposes of illustration and description. They are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Modifications and variations are possible in light of the above teaching. For example, applicant contemplates that present invention may be applied for various purposes, such as economizing use and optimizing storage of fossil fuels or other non-fossil energy conservation, as well as bioinformatic/biohazard or other remote sensor application for homeland security and defense or anti-terrorist surveillance or control functions.

The embodiments were chosen and described in order to explain the principles and the application of the invention, thereby enabling others skilled in the art to utilize the invention in its various embodiments and modifications according to the particular purpose contemplated. The scope of the invention is intended to be defined by the claims appended hereto and their equivalents.

The invention claimed is:

1. Integrated power and sensor-based gateway system comprising:

a central controller coupled via a sensor-based gateway to an electrical system;

wherein the sensor-based gateway comprises a programmable signal interconnect and router, the sensor-based gateway using at least one sensor and the central controller automatically using software-automated sensor

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data adaptively to control user interaction and enable communication through a vehicle multimedia interface via the sensor-based gateway according to a specified data rate and telematic navigational and security alert using local routing interconnect network protocol adaptively to control vehicle rescue;

wherein the central controller using the software-automated sensor data adaptively controls electrical power provided through the gateway reactively in response to a measured quality of electrical power signal, and proactively according to a predicted function in a telematic appliance according to the specified data rate and the telematic navigational and security alert to enable rescue service using the software-automated sensor data and local routing interconnect network protocol adaptively according to vehicle location and the specified data rate.

2. System of claim 1 wherein a body and powertrain control system is coupled to a 14-volt load coupled to a 14-volt DC bus.

3. Integrated power and sensor-based gateway activation method comprising steps:

activating a sensor-based gateway microprocessor to run software for vehicle systems;

activating an electrical system;

activating a power-system power control unit; and

activating a battery, or fuel cell stack process;

wherein the sensor-based gateway microprocessor comprises a programmable signal interconnect and router, the sensor-based gateway microprocessor using at least one sensor automatically using software-automated sensor data adaptively to control user interaction and enable communication through a vehicle multimedia interface via the sensor-based gateway according to a specified data rate and telematic navigational and security alert using local routing interconnect network protocol adaptively to control vehicle rescue;

wherein the central controller using the software-automated sensor data adaptively controls electrical power provided through the gateway reactively in response to a measured quality of electrical power signal, and proactively according to a predicted function in a telematic appliance according to the specified data rate and the telematic navigational and security alert to enable rescue service using the software-automated sensor data and local routing interconnect network protocol adaptively according to vehicle location and the specified data rate.

4. Method of claim 3 wherein the power-system power control unit couples the battery or fuel cell stack via an inverter to a traction motor.

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